Lemoine F   Nasa Goddard Space Flight Center
Chinn D   SGT Inc.
Le Bail K   NVI Inc.
Zelensky N   SGT Inc.
Melachroinos S SGT Inc.
Beall J   Raytheon Mission Operations and Services

TITLE: **Combined weekly coordinate solutions from SLR and DORIS**

In ITRF2005 and ITRF2008, the approach for the construction of solutions by the IERS has been for individual analysis centers of each technique to process geodetic tracking data, and for each technique to develop a solution (or contribution) that is integrated into the final ITRF solution by careful combination of the technique solutions. The connections between the geodetic networks are realized by the application of local ties. In an alternate approach, we may assure processing homogeneity by creating normal equations for different techniques with the same orbit determination software, using identically derived algorithms. Another derivative of this approach is to realize the ties between the techniques using satellites tracked with multiple techniques; in effect tieing the networks together using satellite dynamics. In this solution, we develop a time series and a set of cumulative solutions from SLR & DORIS based on homogeneous processing with the NASA GEODYN precise orbit determination suite of programs, where we jointly combine weekly the SLR data to Lageos1, Lageos2, Starlette, and Stella with the DORIS data from SPOT2-SPOT5, as well as satellites that utilize both techniques (TOPEX/Poseidon, Envisat, Jason-2). We discuss the modeling that is applied including upgrades implemented since the submission of the GSC ITRF2008 contributions for IDS. Firstly, we compare the SLR-only solutions comprising four geodetic satellites with the standard approach of utilizing only Lageos1 & Lageos2. Secondly, we evaluate the impact on the DORIS coordinates of the joint analysis with the SLR data.